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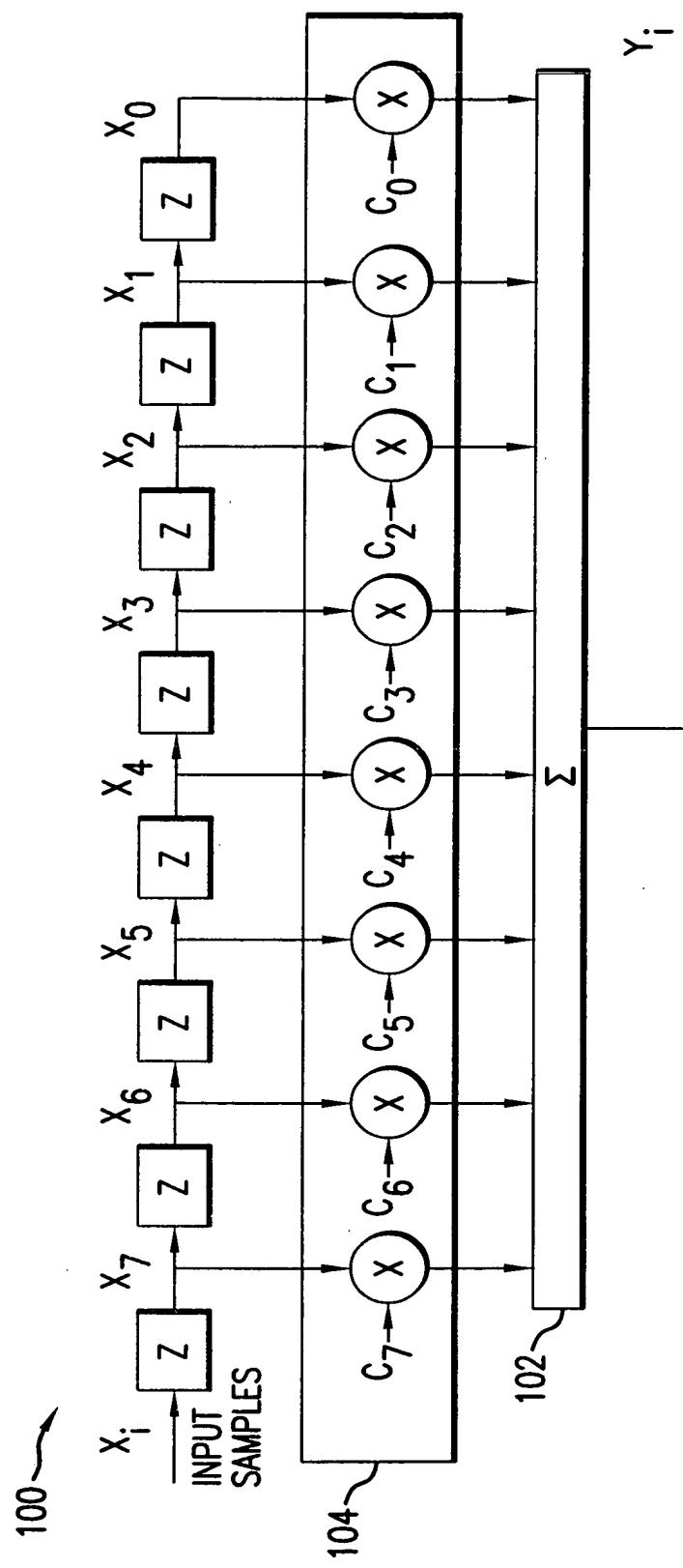
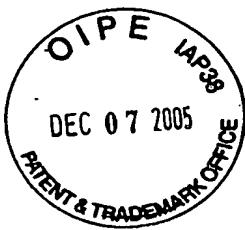


FIG. 1

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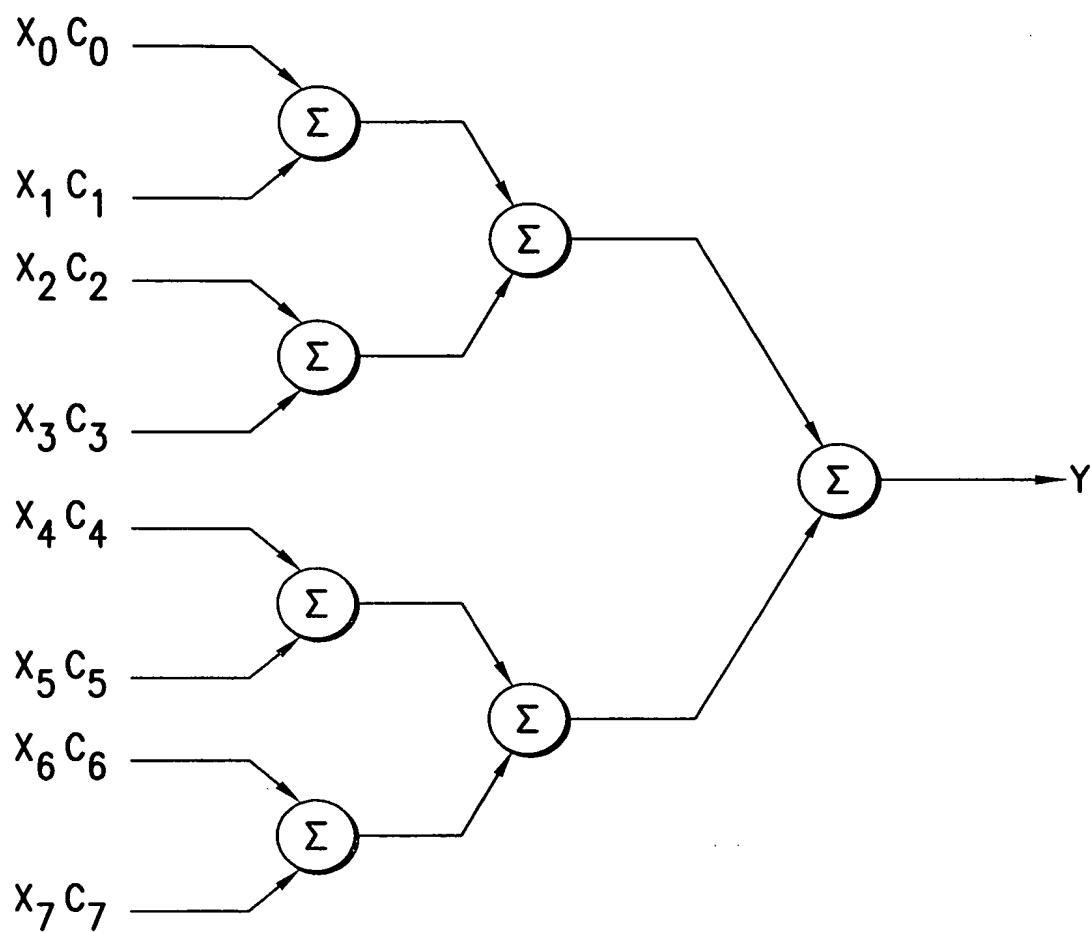


FIG. 2

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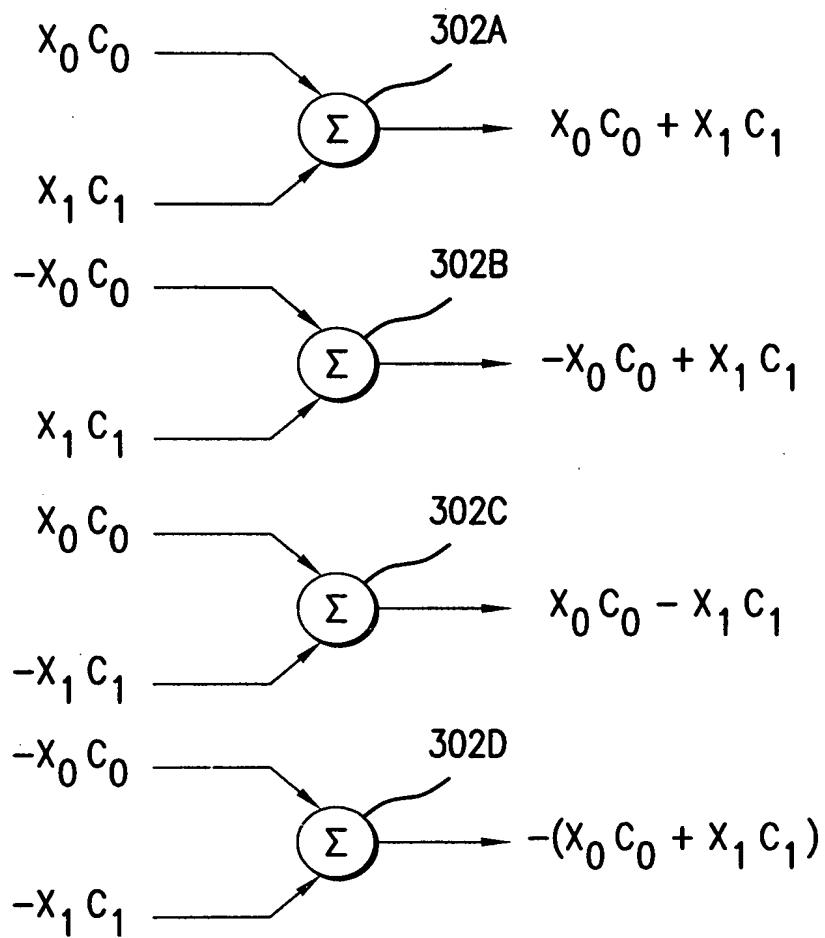
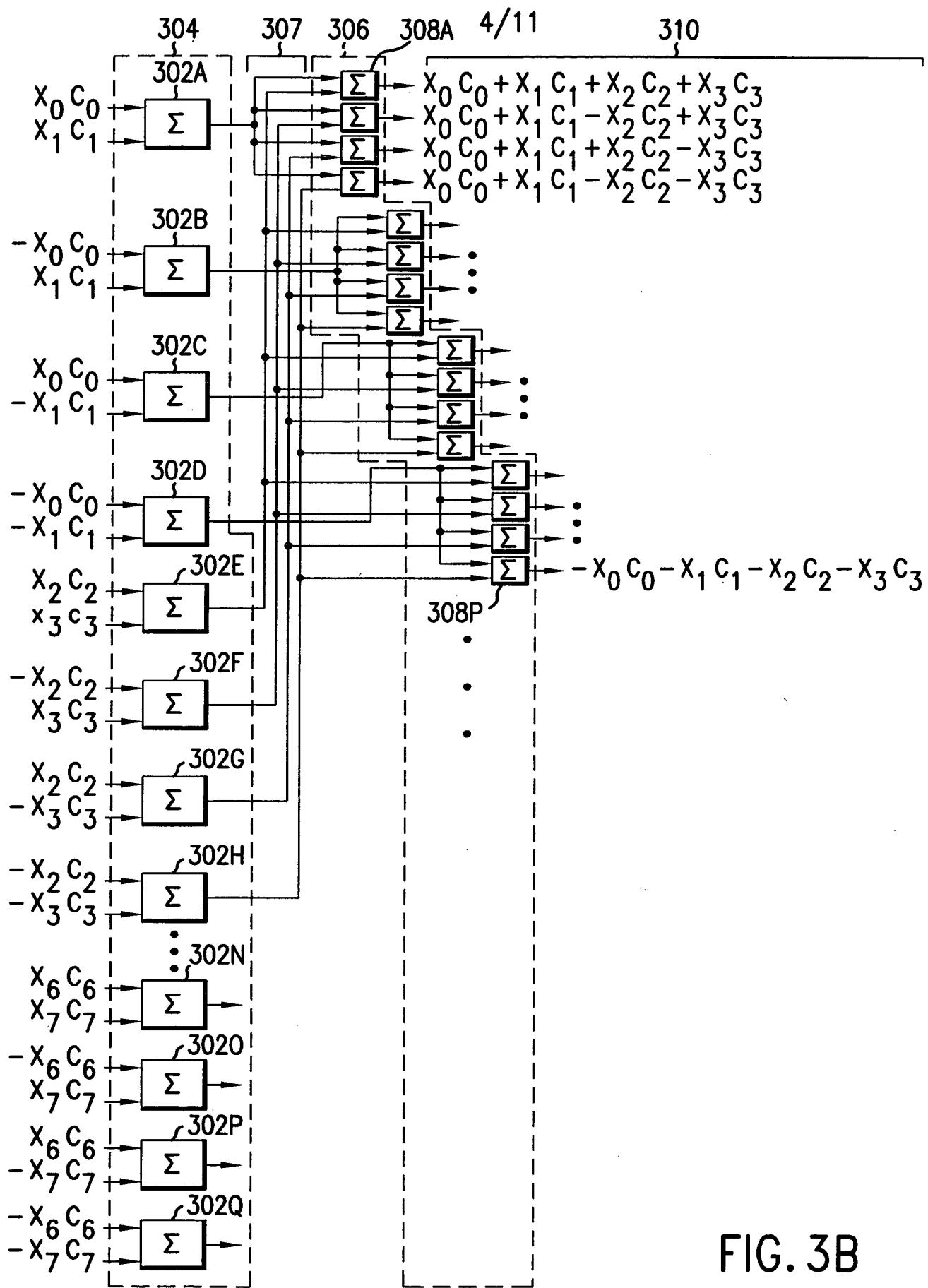


FIG. 3A



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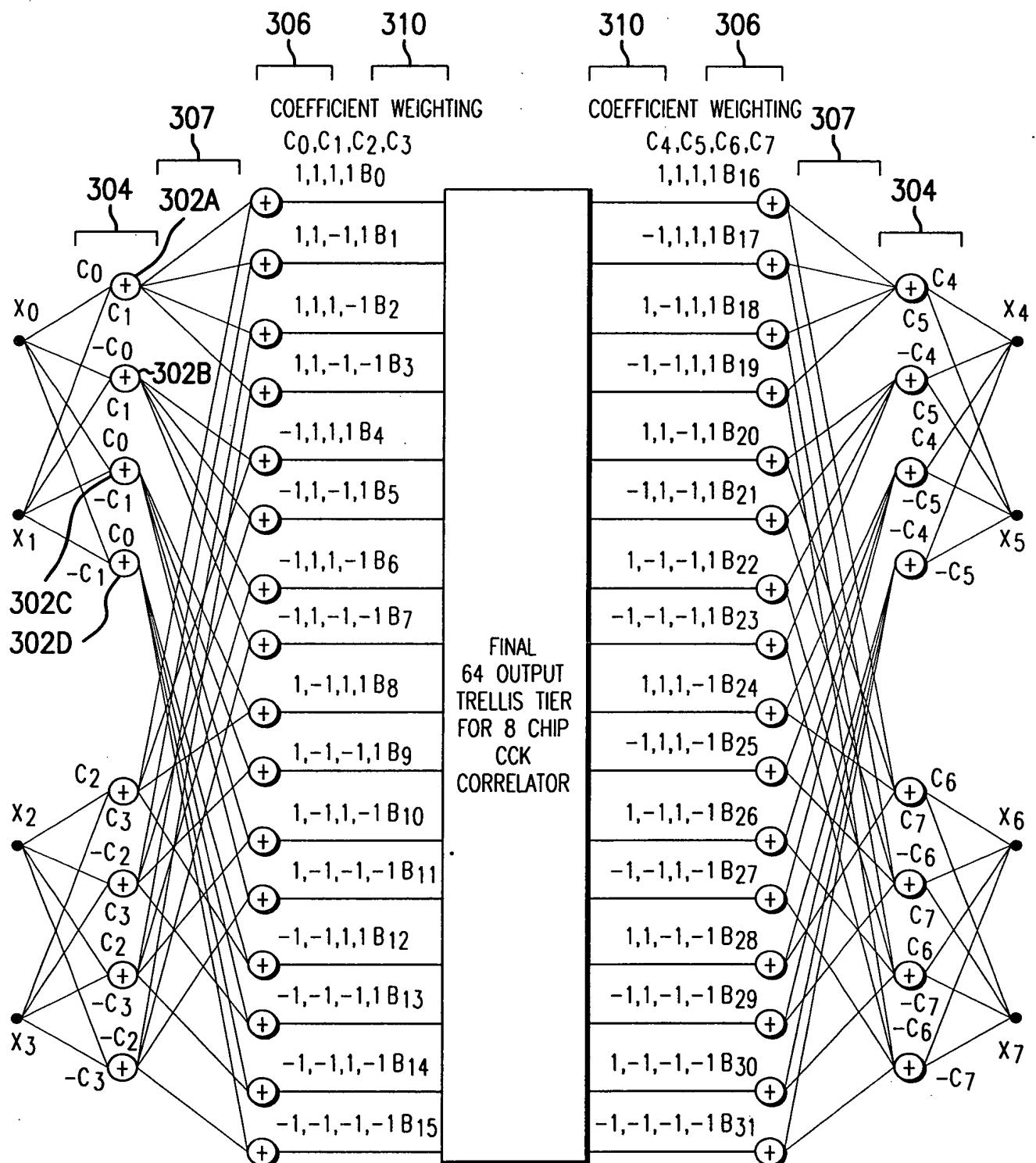


FIG. 3C

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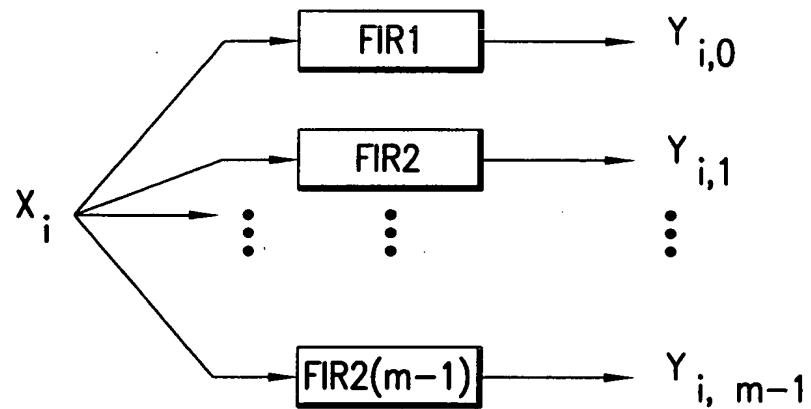
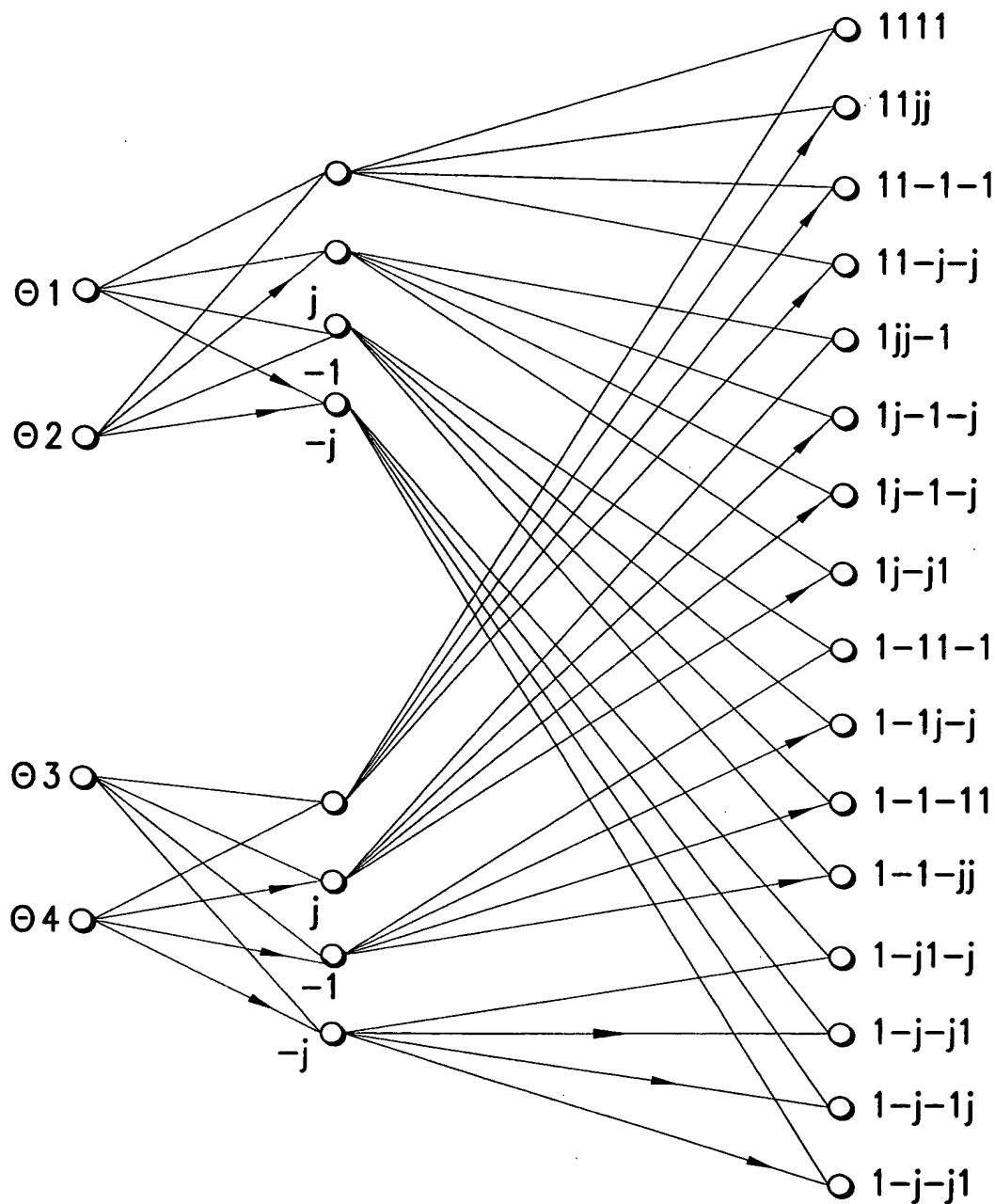


FIG. 4A

$$C_{k, m-1} = \begin{bmatrix} C_{0, 0} & C_{0, 1} & \cdots & C_{0, m-1} \\ C_{1, 0} & \ddots & & \\ C_{2, 0} & & \ddots & \\ \vdots & & & \ddots \\ C_{k, 0} & & & C_{k, m-1} \end{bmatrix}$$

FIG. 4B

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PSK FAST HADAMARD TRANSFORM

FIG. 5

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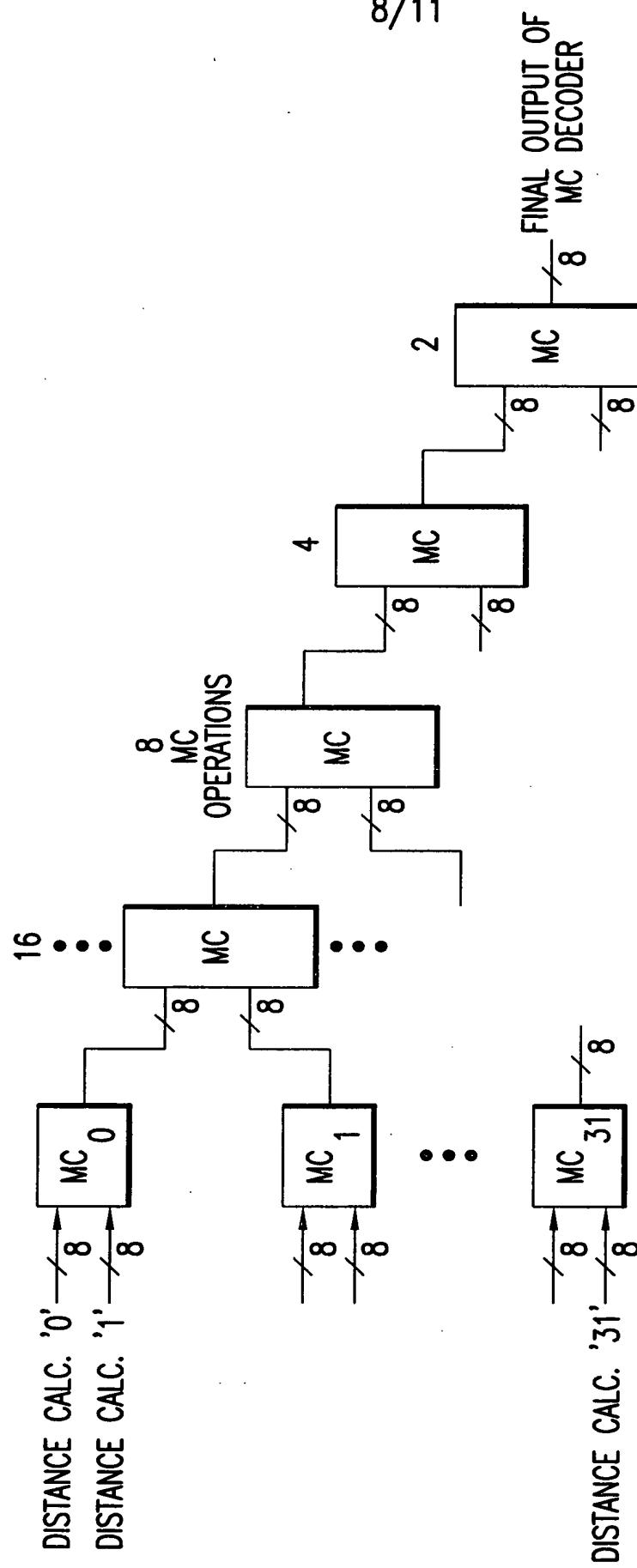


FIG. 6

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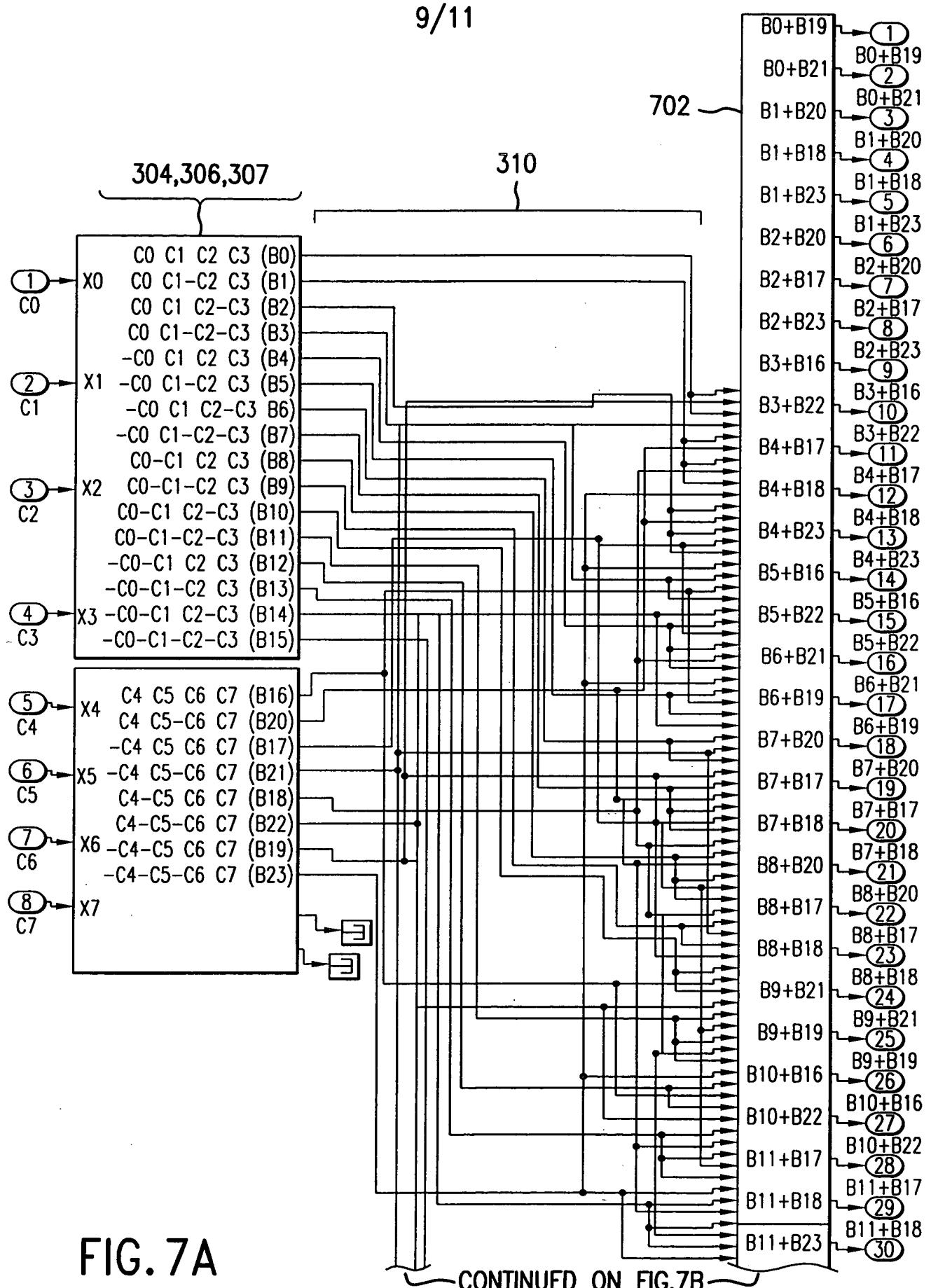


FIG. 7A

CONTINUED ON FIG.7B

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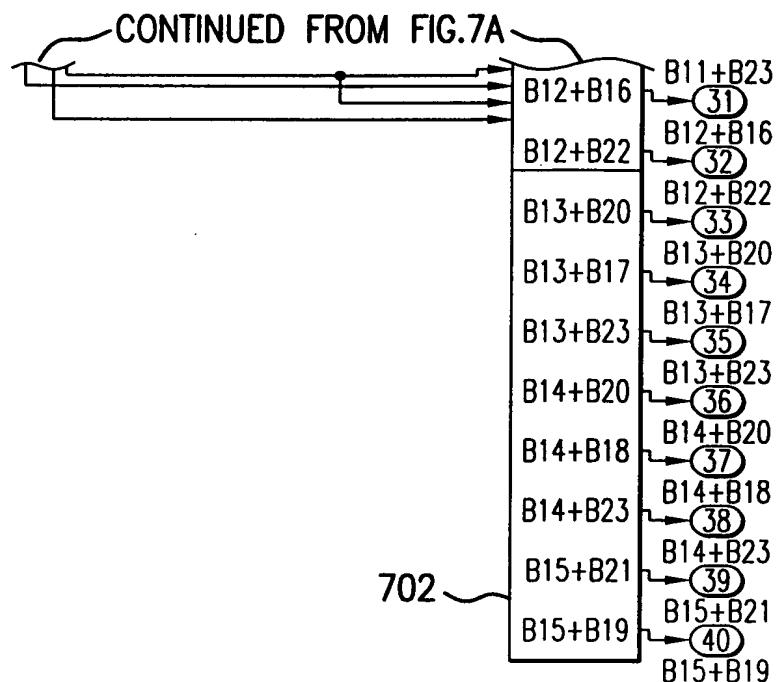


FIG. 7B

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800

802

MULTIPLYING X_0 WITH EACH STATE ($C_{0(0)}$ THROUGH $C_{0(k-1)}$) OF THE COEFFICIENT C_0 , THEREBY GENERATING RESULTS $X_0 C_{0(0)}$ THROUGH $X_0 C_{0(k-1)}$.

804

REPEATING STEP 802 FOR DATA BITS ($X_1 - X_{M-1}$) AND CORRESPONDING COEFFICIENTS ($C_1 - C_{M-1}$), RESPECTIVELY.

806

GROUPING THE RESULTS OF STEPS 802 AND 804 INTO N GROUPS AND SUMMING COMBINATIONS WITHIN EACH OF THE N GROUPS, THEREBY GENERATING A FIRST LAYER OF CORRELATION RESULTS.

808

GROUPING THE RESULTS OF STEP 806 AND SUMMING COMBINATIONS OF RESULTS WITHIN EACH GROUP TO GENERATE ONE OR MORE ADDITIONAL LAYERS OF RESULTS, AND REPEATING THIS PROCESS UNTIL A FINAL LAYER OF RESULTS INCLUDES A SEPARATE CORRELATION OUTPUT FOR EACH POSSIBLE STATE OF THE COMPLETE SET OF COEFFICIENTS ($C_0 - C_{M-1}$).

810

COMPARING MAGNITUDES OUTPUT OF THE SEPARATE CORRELATION OUTPUTS, THEREBY IDENTIFYING A MOST LIKELY CODE ENCODED ON SAID DATA WORD.

FIG. 8